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54 Method of manufacturing a semiconductor device provided with a number of pn junctions separated each time by depression, and semiconductor device provided with a number of pn junctions separated each time by a depression.

57) The invention relates to a method of manufacturing semiconductor devices whereby a pn junction (2) is provided in a slice of semiconductor material (1) parallel to the main surfaces (3, 6) thereof, after which depressions (4) are provided in a main surface (3) cutting through the pn junction (2), so that mutually separated pn junctions (2a, 2b, 2c) are created, and the slice (1) is split up into separate semiconductor bodies (10) at the areas of some of these depressions (4a, 4c), each body comprising a num-

ber of the pn junctions (2a, 2b), while a layer of insulating material (5) is provided on walls of the depressions (4). According to the invention, the depressions (4) are provided in one main surface (3) only of the slice (1), and the layer of insulating material (5) is provided before the slice (1) is split up into separate semiconductor bodies (10). It is achieved by this that the insulating layer (5) can be applied to the walls of the depressions (4) in a simple manner.

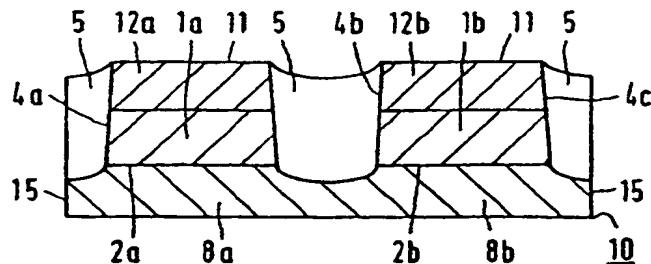


FIG. 4



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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.CLS)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DE-A-15 14 363 (RCA CORP.)	1-6	H01L21/78
Y	* column 2, line 68 - column 6, line 29; figures *	7-10	H01L21/82 H01L27/08
Y	US-A-3 689 993 (TEXAS INSTRUMENTS)	9, 10	
	* column 6, line 43 - column 7, line 2 *		
Y	FR-A-2 538 616 (THOMSON-CSF)	7	
	* page 8, line 28 - line 31 *		
Y	US-A-5 164 813 (UNITRODE CORP.)	8	
	* column 8, line 43 - line 52 *		
A	DE-A-29 30 460 (LICENTIA PATENT-VERWALT.)	1-10	
	* figures *		
P, X	WO-A-93 08592 (BOSCH)	1-3, 5, 7, 9, 10	
	* page 18, paragraph 3 - page 19, paragraph 1; figures 1-8 *		
A, D	FR-A-2 099 616 (GENERAL ELECTRIC)	1-10	TECHNICAL FIELDS SEARCHED (Int.CLS)
	* figures *		H01L
A	FR-A-2 335 957 (R.T.C.)	9, 10	
	* figures 2, 4 *		
A	FR-A-2 099 615 (GENERAL ELECTRIC)	1, 9, 10	
	* figures *		
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	26 April 1995	Gori, P	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	